REMARKS

The abstract was objected to because it should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is respectfully submitted that the abstract is in narrative form, is a single paragraph on a separate page of the application, and is 137 words in length. As the MPEP §608.01(b) states, if the invention is a machine or apparatus, the abstract should state its organization and operation, which the present abstract does. It is respectfully requested that the objection to the abstract be withdrawn.

The specification was objected to as lacking the appropriate heading for a disclosure. However, Section 608.01(a) and the relevant section of 37 CFR both state that headings are optional. "These guidelines are suggested for the applicant's use." Since heading have been found by caselaw to be limiting, applicants have declined to use headings in their application. It is respectfully requested that objection to the lack of headings be withdrawn.

Claims 10 and 14 were objected to because of certain informalities. The Examiner suggested how the informalities could be resolved. Claims 10 and 14 have been rewritten as the Examiner has suggested. It is respectfully submitted that the informalities to Claims 10 and 14 have been resolved.

Claims 1 and 14 were rejected under 35 U.S.C. §112, second paragraph, for reciting the term "the second passage." The referenced passages in these claims describe a "second passageway", which is distinguished from the first-named, fluid-filled passageway. However, these claims have been clarified by amending "second passageway" to read "drive mechanism passageway," as that is the purpose of this passageway. Accordingly it is respectfully requested that the §112 rejection be withdrawn.

Claims 1-20 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Pat. 4,807,634 (Enjoji et al.) submitted by applicants. The claims have been amended to further distinguish over Enjoji et al. Amended Claim 1 describes an ultrasound probe which scans a subject with beams of ultrasound transmitted by a moving transducer comprising a fluid-filled chamber having a main compartment in which the transducer is movably mounted; a secondary compartment of the fluid-filled chamber having an interior surface which conducts bubbles away from a fluid-filled passageway connecting the main and secondary compartments when the probe is held in a given orientation, wherein the passageway connecting the main and secondary compartments is accessed at a point in the

main compartment to which bubbles are designed to flow when the probe is held in the given orientation; and a drive mechanism extending into the fluid-filled chamber which supplies a motive force for the transducer, the drive mechanism passing through a drive mechanism passageway connecting the main and secondary compartments and terminating in the main compartment of the fluid-filled chamber. As described in the specification passage spanning pages 6-7, air bubbles forming in the main compartment will float to a bubble trap tube connecting the main and secondary compartments and when the bubbles flow into the secondary compartment, an interior surface of the secondary compartment conducts the bubbles away from the bubble trap tube. Thus, not only are bubbles preferentially promoted to flow out of the main compartment, they are further conducted away from the passageway to the secondary compartment after they flow into the secondary compartment. This retards the bubbles from re-entering the main compartment when the probe is put back in its probe holder on the ultrasound machine.

Enjoji et al. have designed a sloping wall 22 of their probe so that bubbles 60 flow to the hole 54 around the drive shaft 44 of their probe when the user holds the probe in its standard orientation during use with the lens 16 pressed downward against the patient. The bubbles 60 then flow into a bubble trap chamber 52 as shown by the arrow in Fig. 2. Pressure is equalized between the two chambers by the flow of fluid back into the main chamber 50 through a hole 56. But once bubbles 60 enter the chamber 52, they float up to a flat wall through which the dynamic seal 48 around the shaft 44 is located. If the bubbles stay around the shaft 44, they will float back through the hole 54 when the probe is inverted and returned to its probe holder. Thus, the bubbles are as likely as not to re-enter the main chamber 50. By contrast, our inventive probe has an interior surface that immediately conducts bubbles away from the passageway when they enter the secondary compartment. The bubbles will not linger immediately above the passageway where they are likely to re-enter the main chamber when the probe is inverted and hung in its holder. This same flat-walled design is present in every one of Enjoji et al.'s embodiments. Accordingly it is respectfully submitted that Claim 1 and its dependent Claims 2-13 cannot be anticipated by Enjoji et al.

Amended Claim 14 describes an ultrasound probe which scans a subject with beams of ultrasound transmitted by a moving transducer comprising a fluid-filled chamber having a main compartment in which the transducer is movably mounted; a secondary compartment of the fluid-filled chamber; a wall separating the main and secondary compartments which is sloped to an uppermost location; a fluid-filled passageway located at an uppermost location

in the main compartment and connecting the main and secondary compartments; and a drive mechanism extending through a drive mechanism passageway of the wall and terminating in the main compartment which supplies a motive force for the transducer, wherein the main compartment exhibits an interior surface which promotes the travel of bubbles in the main compartment toward the fluid-filled passageway when the probe is held in a given orientation, and wherein the secondary compartment exhibits an interior surface which promotes the travel of bubbles in the secondary compartment away from the fluid-filled passageway when the probe is held in the given orientation. In an embodiment of the probe of Claim 14, not only are bubbles promoted to the passageway by an interior surface of the main compartment, once they enter the secondary compartment an interior surface of that compartment promotes the travel of bubbles away from the passageway, further lessening the chance that they will re-enter the main compartment. In Enjoji et al.'s probes, bubbles that flow into the bubble trap chamber 52 flow up to a flat wall which does not promote their movement away from the drive shaft 44 and the bubble passageway 54 around the shaft. The secondary compartment does not have an interior surface that will move the bubbles away from the hole as soon as they flow in the bubble trap chamber 52, as recited in Claim 14. Accordingly it is respectfully submitted that Claim 14 and its dependent Claims 15-20 cannot be anticipated by Enjoji et al.

In view of the foregoing amendments and remarks, it is respectfully submitted that the amended claims are clear and definite and cannot be anticipated by Enjoji et al. Accordingly it is respectfully requested that the rejection of Claims 1-20 under 35 U.S.C. §112 and §102(b) be withdrawn.

In light of the foregoing amendment and remarks, it is respectfully submitted that this application is now in condition for allowance. Favorable reconsideration is respectfully requested.

Respectfully submitted,

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